DD5L Series
Dome Drive

Installation/
Operation Manual

C1471M (10/98)

CONTENTS

LIST OF ILLUSTRATIONS

LIST OF TABLES

REVISION HISTORY

Manual #	Date	Comments
C1471CM	10/98	Original version.

1.1 IMPORTANT SAFEGUARDS AND WARNINGS

Observe the following WARNINGS before installing and using this product.

1. Installation and servicing should only be done by qualified service personnel and conform to all local codes.

2. Unless the unit is specifically marked as a NEMA Type 3, 3R, 3S, 4, 4X, 6, or 6P enclosure, it is designed for indoor use only and it must not be installed where exposed to rain and moisture.

3. Only use replacement parts Pelco recommends.

4. After replacing or repairing this unit's electrical components, measure the resistance between the line and exposed parts to verify the exposed parts have not been connected to line circuitry.

5. The installation method and materials should be capable of supporting four times the weight of the enclosure, pan and tilt, camera and lens combination.

The product and/or manual may bear the following marks:

This symbol indicates that dangerous voltage constituting a risk of electric shock is present within this unit.

This symbol indicates that there are important operating and maintenance instructions in the literature accompanying this unit.

CAUTION:
RISK OF
ELECTRIC SHOCK.
DO NOT OPEN.

CAUTION:
TO REDUCE THE RISK OF ELECTRICAL SHOCK,
DO NOT REMOVE COVER. NO USER-
SERVICEABLE PARTS INSIDE. REFER SERVICING
TO QUALIFIED SERVICE PERSONNEL.
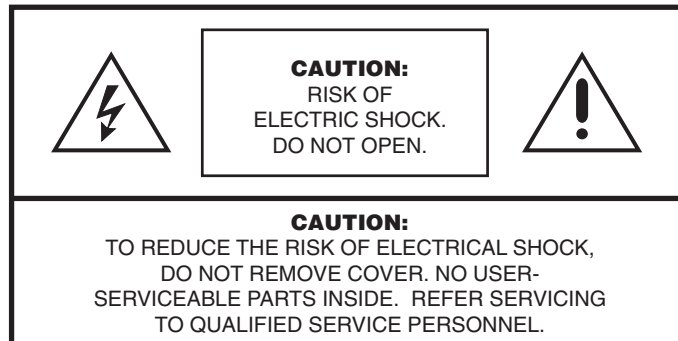
**Please thoroughly familiarize yourself with the information
in this manual prior to installation and operation.**

1.2 UNPACKING INSTRUCTIONS

This box contains one dome drive and one Installation/Operation manual (C1471M). Inspect all parts carefully. Save the shipping carton, boxes, and inserts. If an item appears damaged, replace it in its box and contact the factory at 1-800-289-9100 or 1-209-292-1981 for replacement. (International customers fax 1-209-348-1120 for authorization and instructions.) To return an item to the factory for repair, refer to Section 8.0, WARRANTY AND RETURN, for instructions.

BACK
BOX

DOME
DRIVE

LOWER
DOME
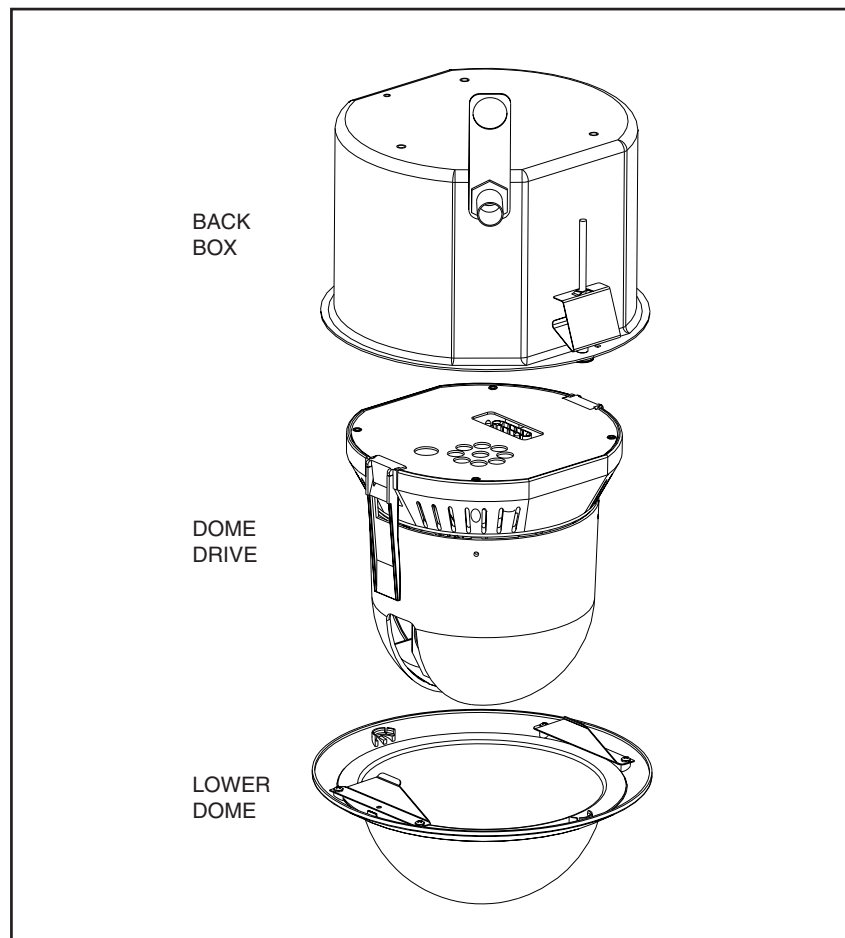
Figure 1. System Components (In-Ceiling Model Shown)

Spectra® Lite domes can do the following:

• 360° pan rotation
• preset positioning
• +2 to -92° tilt
• variable speed

All Spectra® Lite models include a color CCD camera with a 12X zoom lens and capability to focus when going to a preset position. An integral receiver has a switch to select the type of control. The receiver supports Coaxitron® and RS-422 control types. The dome operates on 24 VAC. The dome drive is quickly installed and removed from the back box without tools.

2.1 MODELS

DD5L-C   Dome drive with color camera and lens, NTSC standard

3.0 INSTALLATION

⚠ **CAUTION:** *Make sure the dome drive locks into place. Pull down on the dome drive with moderate pressure to ensure that it stays in place.*

1. Turn on power to the back box. The red LED should light to indicate power. If the LED does not light, correct the trouble before proceeding. (Refer to Section 6.0, TROUBLESHOOTING, in manual C1487M.) If the light operates, you may either leave power on or turn it off before continuing the installation.

2. Set the switches on the bottom of the dome drive. Refer to Table A for the settings for SW1, and Table B and Table C for SW2.

3. Install the dome drive in the back box. Line up the green tab and red tab on the dome drive with the green label and red label on the back box. Raise the dome drive into the back box and push on the ends of the tabs until they both click into place on the back box.

4. Turn on power, if it is not on. Listen for the fan operating. If the fan does not work, the dome will overheat and shut down. If the fan does not work, return the back box electronic assembly and dome drive to the factory for repair. Refer to Section 6.1, BACK BOX ELECTRONIC ASSEMBLY REMOVAL, in manual C1487M.

Table A. Switch Settings for SW1

Control Type	Switch Setting							
	SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6	SW1-7	SW1-8
Coaxitron®	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF**
P-Type Control	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF**
D-Type Control	OFF	ON	OFF	OFF	OFF	OFF	OFF*	OFF**

NOTES: Switches SW1-3 through SW1-6 MUST be OFF.
D-type control is RS-422 that is compatible with Pelco's CM6700, MPT9500 and CM8500
   controllers or with American Dynamics control systems using the AD2083 Translator.
P-type control is RS-422 that is compatible with Pelco's CM6700/CM9750/CM9760 control systems.
 * OFF- Use with controllers that have more than 32 presets.
ON- Use with American Dynamics controllers (32 presets).
** OFF - Use with all control systems except CM9502 with <u>variable</u> speed keyboards.
     For CM9502 with <u>fixed</u> speed keyboards, set switch OFF.
ON - Use with CM9502 with <u>variable</u> speed keyboards for smoother joystick control.

Table B. Switch Settings for SW2 – P-Type Control

NOTE: *For Coaxitron® controls, all switches on SW2 MUST be OFF.*
For D-type control systems, refer to Table C.

Receiver Address	Switch Setting				
	SW2-1	SW2-2	SW2-3	SW2-4	SW2-5
1	OFF	OFF	OFF	OFF	OFF
2	ON	OFF	OFF	OFF	OFF
3	OFF	ON	OFF	OFF	OFF
4	ON	ON	OFF	OFF	OFF
5	OFF	OFF	ON	OFF	OFF
6	ON	OFF	ON	OFF	OFF
7	OFF	ON	ON	OFF	OFF
8	ON	ON	ON	OFF	OFF
9	OFF	OFF	OFF	ON	OFF
10	ON	OFF	OFF	ON	OFF
11	OFF	ON	OFF	ON	OFF
12	ON	ON	OFF	ON	OFF
13	OFF	OFF	ON	ON	OFF
14	ON	OFF	ON	ON	OFF
15	OFF	ON	ON	ON	OFF
16	ON	ON	ON	ON	OFF
17	OFF	OFF	OFF	OFF	ON
18	ON	OFF	OFF	OFF	ON
19	OFF	ON	OFF	OFF	ON
20	ON	ON	OFF	OFF	ON
21	OFF	OFF	ON	OFF	ON
22	ON	OFF	ON	OFF	ON
23	OFF	ON	ON	OFF	ON
24	ON	ON	ON	OFF	ON
25	OFF	OFF	OFF	ON	ON
26	ON	OFF	OFF	ON	ON
27	OFF	ON	OFF	ON	ON
28	ON	ON	OFF	ON	ON
29	OFF	OFF	ON	ON	ON
30	ON	OFF	ON	ON	ON
31	OFF	ON	ON	ON	ON
32	ON	ON	ON	ON	ON

Baud Rate	Switch Setting		
	SW2-6	SW2-7	SW2-8
2400	OFF	OFF	OFF
4800	ON	OFF	OFF
9600	OFF	ON	OFF

Table C. Switch Settings for SW2 – D-Type Control

NOTE: *For Coaxitron® controls, all switches on SW2 MUST be OFF.*
For P-type control systems, refer to Table B.

Receiver Address	Switch Setting							
	SW2-1	SW2-2	SW2-3	SW2-4	SW2-5	SW2-6	SW2-7	SW2-8
1	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
3	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
4	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
5	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
6	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF
7	ON	ON	ON	OFF	OFF	OFF	OFF	OFF
8	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
9	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF
10	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF
11	ON	ON	OFF	ON	OFF	OFF	OFF	OFF
12	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF
13	ON	OFF	ON	ON	OFF	OFF	OFF	OFF
14	OFF	ON	ON	ON	OFF	OFF	OFF	OFF
15	ON	ON	ON	ON	OFF	OFF	OFF	OFF
16	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF
17	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF
18	OFF	ON	OFF	OFF	ON	OFF	OFF	OFF
19	ON	ON	OFF	OFF	ON	OFF	OFF	OFF
20	OFF	OFF	ON	OFF	ON	OFF	OFF	OFF
21	ON	OFF	ON	OFF	ON	OFF	OFF	OFF
22	OFF	ON	ON	OFF	ON	OFF	OFF	OFF
23	ON	ON	ON	OFF	ON	OFF	OFF	OFF
24	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF
25	ON	OFF	OFF	ON	ON	OFF	OFF	OFF
26	OFF	ON	OFF	ON	ON	OFF	OFF	OFF
27	ON	ON	OFF	ON	ON	OFF	OFF	OFF
28	OFF	OFF	ON	ON	ON	OFF	OFF	OFF
29	ON	OFF	ON	ON	ON	OFF	OFF	OFF
30	OFF	ON	ON	ON	ON	OFF	OFF	OFF
31	ON	ON	ON	ON	ON	OFF	OFF	OFF
32	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF
33	ON	OFF	OFF	OFF	OFF	ON	OFF	OFF
34	OFF	ON	OFF	OFF	OFF	ON	OFF	OFF
35	ON	ON	OFF	OFF	OFF	ON	OFF	OFF
36	OFF	OFF	ON	OFF	OFF	ON	OFF	OFF
37	ON	OFF	ON	OFF	OFF	ON	OFF	OFF
38	OFF	ON	ON	OFF	OFF	ON	OFF	OFF
39	ON	ON	ON	OFF	OFF	ON	OFF	OFF
40	OFF	OFF	OFF	ON	OFF	ON	OFF	OFF
41	ON	OFF	OFF	ON	OFF	ON	OFF	OFF
42	OFF	ON	OFF	ON	OFF	ON	OFF	OFF
43	ON	ON	OFF	ON	OFF	ON	OFF	OFF
44	OFF	OFF	ON	ON	OFF	ON	OFF	OFF
45	ON	OFF	ON	ON	OFF	ON	OFF	OFF
46	OFF	ON	ON	ON	OFF	ON	OFF	OFF
47	ON	ON	ON	ON	OFF	ON	OFF	OFF
48	OFF	OFF	OFF	OFF	ON	ON	OFF	OFF
49	ON	OFF	OFF	OFF	ON	ON	OFF	OFF
50	OFF	ON	OFF	OFF	ON	ON	OFF	OFF
51	ON	ON	OFF	OFF	ON	ON	OFF	OFF
52	OFF	OFF	ON	OFF	ON	ON	OFF	OFF
53	ON	OFF	ON	OFF	ON	ON	OFF	OFF
54	OFF	ON	ON	OFF	ON	ON	OFF	OFF
55	ON	ON	ON	OFF	ON	ON	OFF	OFF
56	OFF	OFF	OFF	ON	ON	ON	OFF	OFF

Table C. Switch Settings for SW2 – D-Type Control (Continued)

NOTE: *For Coaxitron® controls, all switches on SW2 MUST be OFF.*
For P-type control systems, refer to Table B.

Receiver Address	Switch Setting							
	SW2-1	SW2-2	SW2-3	SW2-4	SW2-5	SW2-6	SW2-7	SW2-8
57	ON	OFF	OFF	ON	ON	ON	OFF	OFF
58	OFF	ON	OFF	ON	ON	ON	OFF	OFF
59	ON	ON	OFF	ON	ON	ON	OFF	OFF
60	OFF	OFF	ON	ON	ON	ON	OFF	OFF
61	ON	OFF	ON	ON	ON	ON	OFF	OFF
62	OFF	ON	ON	ON	ON	ON	OFF	OFF
63	ON	ON	ON	ON	ON	ON	OFF	OFF
64	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF
65	ON	OFF	OFF	OFF	OFF	OFF	ON	OFF
66	OFF	ON	OFF	OFF	OFF	OFF	ON	OFF
67	ON	ON	OFF	OFF	OFF	OFF	ON	OFF
68	OFF	OFF	ON	OFF	OFF	OFF	ON	OFF
69	ON	OFF	ON	OFF	OFF	OFF	ON	OFF
70	OFF	ON	ON	OFF	OFF	OFF	ON	OFF
71	ON	ON	ON	OFF	OFF	OFF	ON	OFF
72	OFF	OFF	OFF	ON	OFF	OFF	ON	OFF
73	ON	OFF	OFF	ON	OFF	OFF	ON	OFF
74	OFF	ON	OFF	ON	OFF	OFF	ON	OFF
75	ON	ON	OFF	ON	OFF	OFF	ON	OFF
76	OFF	OFF	ON	ON	OFF	OFF	ON	OFF
77	ON	OFF	ON	ON	OFF	OFF	ON	OFF
78	OFF	ON	ON	ON	OFF	OFF	ON	OFF
79	ON	ON	ON	ON	OFF	OFF	ON	OFF
80	OFF	OFF	OFF	OFF	ON	OFF	ON	OFF
81	ON	OFF	OFF	OFF	ON	OFF	ON	OFF
82	OFF	ON	OFF	OFF	ON	OFF	ON	OFF
83	ON	ON	OFF	OFF	ON	OFF	ON	OFF
84	OFF	OFF	ON	OFF	ON	OFF	ON	OFF
85	ON	OFF	ON	OFF	ON	OFF	ON	OFF
86	OFF	ON	ON	OFF	ON	OFF	ON	OFF
87	ON	ON	ON	OFF	ON	OFF	ON	OFF
88	OFF	OFF	OFF	ON	ON	OFF	ON	OFF
89	ON	OFF	OFF	ON	ON	OFF	ON	OFF
90	OFF	ON	OFF	ON	ON	OFF	ON	OFF
91	ON	ON	OFF	ON	ON	OFF	ON	OFF
92	OFF	OFF	ON	ON	ON	OFF	ON	OFF
93	ON	OFF	ON	ON	ON	OFF	ON	OFF
94	OFF	ON	ON	ON	ON	OFF	ON	OFF
95	ON	ON	ON	ON	ON	OFF	ON	OFF
96	OFF	OFF	OFF	OFF	OFF	ON	ON	OFF
97	ON	OFF	OFF	OFF	OFF	ON	ON	OFF
98	OFF	ON	OFF	OFF	OFF	ON	ON	OFF
99	ON	ON	OFF	OFF	OFF	ON	ON	OFF
100	OFF	OFF	ON	OFF	OFF	ON	ON	OFF
101	ON	OFF	ON	OFF	OFF	ON	ON	OFF
102	OFF	ON	ON	OFF	OFF	ON	ON	OFF
103	ON	ON	ON	OFF	OFF	ON	ON	OFF
104	OFF	OFF	OFF	ON	OFF	ON	ON	OFF
105	ON	OFF	OFF	ON	OFF	ON	ON	OFF
106	OFF	ON	OFF	ON	OFF	ON	ON	OFF
107	ON	ON	OFF	ON	OFF	ON	ON	OFF
108	OFF	OFF	ON	ON	OFF	ON	ON	OFF
109	ON	OFF	ON	ON	OFF	ON	ON	OFF
110	OFF	ON	ON	ON	OFF	ON	ON	OFF
111	ON	ON	ON	ON	OFF	ON	ON	OFF
112	OFF	OFF	OFF	OFF	ON	ON	ON	OFF

Table C. Switch Settings for SW2 – D-Type Control (Continued)

NOTE: *For Coaxitron® controls, all switches on SW2 MUST be OFF.*
For P-type control systems, refer to Table B.

Receiver Address	Switch Setting							
	SW2-1	SW2-2	SW2-3	SW2-4	SW2-5	SW2-6	SW2-7	SW2-8
113	ON	OFF	OFF	OFF	ON	ON	ON	OFF
114	OFF	ON	OFF	OFF	ON	ON	ON	OFF
115	ON	ON	OFF	OFF	ON	ON	ON	OFF
116	OFF	OFF	ON	OFF	ON	ON	ON	OFF
117	ON	OFF	ON	OFF	ON	ON	ON	OFF
118	OFF	ON	ON	OFF	ON	ON	ON	OFF
119	ON	ON	ON	OFF	ON	ON	ON	OFF
120	OFF	OFF	OFF	ON	ON	ON	ON	OFF
121	ON	OFF	OFF	ON	ON	ON	ON	OFF
122	OFF	ON	OFF	ON	ON	ON	ON	OFF
123	ON	ON	OFF	ON	ON	ON	ON	OFF
124	OFF	OFF	ON	ON	ON	ON	ON	OFF
125	ON	OFF	ON	ON	ON	ON	ON	OFF
126	OFF	ON	ON	ON	ON	ON	ON	OFF
127	ON	ON	ON	ON	ON	ON	ON	OFF
128	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON
129	ON	OFF	OFF	OFF	OFF	OFF	OFF	ON
130	OFF	ON	OFF	OFF	OFF	OFF	OFF	ON
131	ON	ON	OFF	OFF	OFF	OFF	OFF	ON
132	OFF	OFF	ON	OFF	OFF	OFF	OFF	ON
133	ON	OFF	ON	OFF	OFF	OFF	OFF	ON
134	OFF	ON	ON	OFF	OFF	OFF	OFF	ON
135	ON	ON	ON	OFF	OFF	OFF	OFF	ON
136	OFF	OFF	OFF	ON	OFF	OFF	OFF	ON
137	ON	OFF	OFF	ON	OFF	OFF	OFF	ON
138	OFF	ON	OFF	ON	OFF	OFF	OFF	ON
139	ON	ON	OFF	ON	OFF	OFF	OFF	ON
140	OFF	OFF	ON	ON	OFF	OFF	OFF	ON
141	ON	OFF	ON	ON	OFF	OFF	OFF	ON
142	OFF	ON	ON	ON	OFF	OFF	OFF	ON
143	ON	ON	ON	ON	OFF	OFF	OFF	ON
144	OFF	OFF	OFF	OFF	ON	OFF	OFF	ON
145	ON	OFF	OFF	OFF	ON	OFF	OFF	ON
146	OFF	ON	OFF	OFF	ON	OFF	OFF	ON
147	ON	ON	OFF	OFF	ON	OFF	OFF	ON
148	OFF	OFF	ON	OFF	ON	OFF	OFF	ON
149	ON	OFF	ON	OFF	ON	OFF	OFF	ON
150	OFF	ON	ON	OFF	ON	OFF	OFF	ON
151	ON	ON	ON	OFF	ON	OFF	OFF	ON
152	OFF	OFF	OFF	ON	ON	OFF	OFF	ON
153	ON	OFF	OFF	ON	ON	OFF	OFF	ON
154	OFF	ON	OFF	ON	ON	OFF	OFF	ON
155	ON	ON	OFF	ON	ON	OFF	OFF	ON
156	OFF	OFF	ON	ON	ON	OFF	OFF	ON
157	ON	OFF	ON	ON	ON	OFF	OFF	ON
158	OFF	ON	ON	ON	ON	OFF	OFF	ON
159	ON	ON	ON	ON	ON	OFF	OFF	ON
160	OFF	OFF	OFF	OFF	OFF	ON	OFF	ON
161	ON	OFF	OFF	OFF	OFF	ON	OFF	ON
162	OFF	ON	OFF	OFF	OFF	ON	OFF	ON
163	ON	ON	OFF	OFF	OFF	ON	OFF	ON
164	OFF	OFF	ON	OFF	OFF	ON	OFF	ON
165	ON	OFF	ON	OFF	OFF	ON	OFF	ON
166	OFF	ON	ON	OFF	OFF	ON	OFF	ON
167	ON	ON	ON	OFF	OFF	ON	OFF	ON
168	OFF	OFF	OFF	ON	OFF	ON	OFF	ON

Table C. Switch Settings for SW2 – D-Type Control (Continued)

NOTE: *For Coaxitron® controls, all switches on SW2 MUST be OFF.*
For P-type control systems, refer to Table B.

Receiver Address	Switch Setting							
	SW2-1	SW2-2	SW2-3	SW2-4	SW2-5	SW2-6	SW2-7	SW2-8
169	ON	OFF	OFF	ON	OFF	ON	OFF	ON
170	OFF	ON	OFF	ON	OFF	ON	OFF	ON
171	ON	ON	OFF	ON	OFF	ON	OFF	ON
172	OFF	OFF	ON	ON	OFF	ON	OFF	ON
173	ON	OFF	ON	ON	OFF	ON	OFF	ON
174	OFF	ON	ON	ON	OFF	ON	OFF	ON
175	ON	ON	ON	ON	OFF	ON	OFF	ON
176	OFF	OFF	OFF	OFF	ON	ON	OFF	ON
177	ON	OFF	OFF	OFF	ON	ON	OFF	ON
178	OFF	ON	OFF	OFF	ON	ON	OFF	ON
179	ON	ON	OFF	OFF	ON	ON	OFF	ON
180	OFF	OFF	ON	OFF	ON	ON	OFF	ON
181	ON	OFF	ON	OFF	ON	ON	OFF	ON
182	OFF	ON	ON	OFF	ON	ON	OFF	ON
183	ON	ON	ON	OFF	ON	ON	OFF	ON
184	OFF	OFF	OFF	ON	ON	ON	OFF	ON
185	ON	OFF	OFF	ON	ON	ON	OFF	ON
186	OFF	ON	OFF	ON	ON	ON	OFF	ON
187	ON	ON	OFF	ON	ON	ON	OFF	ON
188	OFF	OFF	ON	ON	ON	ON	OFF	ON
189	ON	OFF	ON	ON	ON	ON	OFF	ON
190	OFF	ON	ON	ON	ON	ON	OFF	ON
191	ON	ON	ON	ON	ON	ON	OFF	ON
192	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON
193	ON	OFF	OFF	OFF	OFF	OFF	ON	ON
194	OFF	ON	OFF	OFF	OFF	OFF	ON	ON
195	ON	ON	OFF	OFF	OFF	OFF	ON	ON
196	OFF	OFF	ON	OFF	OFF	OFF	ON	ON
197	ON	OFF	ON	OFF	OFF	OFF	ON	ON
198	OFF	ON	ON	OFF	OFF	OFF	ON	ON
199	ON	ON	ON	OFF	OFF	OFF	ON	ON
200	OFF	OFF	OFF	ON	OFF	OFF	ON	ON
201	ON	OFF	OFF	ON	OFF	OFF	ON	ON
202	OFF	ON	OFF	ON	OFF	OFF	ON	ON
203	ON	ON	OFF	ON	OFF	OFF	ON	ON
204	OFF	OFF	ON	ON	OFF	OFF	ON	ON
205	ON	OFF	ON	ON	OFF	OFF	ON	ON
206	OFF	ON	ON	ON	OFF	OFF	ON	ON
207	ON	ON	ON	ON	OFF	OFF	ON	ON
208	OFF	OFF	OFF	OFF	ON	OFF	ON	ON
209	ON	OFF	OFF	OFF	ON	OFF	ON	ON
210	OFF	ON	OFF	OFF	ON	OFF	ON	ON
211	ON	ON	OFF	OFF	ON	OFF	ON	ON
212	OFF	OFF	ON	OFF	ON	OFF	ON	ON
213	ON	OFF	ON	OFF	ON	OFF	ON	ON
214	OFF	ON	ON	OFF	ON	OFF	ON	ON
215	ON	ON	ON	OFF	ON	OFF	ON	ON
216	OFF	OFF	OFF	ON	ON	OFF	ON	ON
217	ON	OFF	OFF	ON	ON	OFF	ON	ON
218	OFF	ON	OFF	ON	ON	OFF	ON	ON
219	ON	ON	OFF	ON	ON	OFF	ON	ON
220	OFF	OFF	ON	ON	ON	OFF	ON	ON
221	ON	OFF	ON	ON	ON	OFF	ON	ON
222	OFF	ON	ON	ON	ON	OFF	ON	ON
223	ON	ON	ON	ON	ON	OFF	ON	ON
224	OFF	OFF	OFF	OFF	OFF	ON	ON	ON

Table C. Switch Settings for SW2 – D-Type Control (Continued)

NOTE: *For Coaxitron® controls, all switches on SW2 MUST be OFF.*
For P-type control systems, refer to Table B.

Receiver Address	Switch Setting							
	SW2-1	SW2-2	SW2-3	SW2-4	SW2-5	SW2-6	SW2-7	SW2-8
225	ON	OFF	OFF	OFF	OFF	ON	ON	ON
226	OFF	ON	OFF	OFF	OFF	ON	ON	ON
227	ON	ON	OFF	OFF	OFF	ON	ON	ON
228	OFF	OFF	ON	OFF	OFF	ON	ON	ON
229	ON	OFF	ON	OFF	OFF	ON	ON	ON
230	OFF	ON	ON	OFF	OFF	ON	ON	ON
231	ON	ON	ON	OFF	OFF	ON	ON	ON
232	OFF	OFF	OFF	ON	OFF	ON	ON	ON
233	ON	OFF	OFF	ON	OFF	ON	ON	ON
234	OFF	ON	OFF	ON	OFF	ON	ON	ON
235	ON	ON	OFF	ON	OFF	ON	ON	ON
236	OFF	OFF	ON	ON	OFF	ON	ON	ON
237	ON	OFF	ON	ON	OFF	ON	ON	ON
238	OFF	ON	ON	ON	OFF	ON	ON	ON
239	ON	ON	ON	ON	OFF	ON	ON	ON
240	OFF	OFF	OFF	OFF	ON	ON	ON	ON
241	ON	OFF	OFF	OFF	ON	ON	ON	ON
242	OFF	ON	OFF	OFF	ON	ON	ON	ON
243	ON	ON	OFF	OFF	ON	ON	ON	ON
244	OFF	OFF	ON	OFF	ON	ON	ON	ON
245	ON	OFF	ON	OFF	ON	ON	ON	ON
246	OFF	ON	ON	OFF	ON	ON	ON	ON
247	ON	ON	ON	OFF	ON	ON	ON	ON
248	OFF	OFF	OFF	ON	ON	ON	ON	ON
249	ON	OFF	OFF	ON	ON	ON	ON	ON
250	OFF	ON	OFF	ON	ON	ON	ON	ON
251	ON	ON	OFF	ON	ON	ON	ON	ON
252	OFF	OFF	ON	ON	ON	ON	ON	ON
253	ON	OFF	ON	ON	ON	ON	ON	ON
254	OFF	ON	ON	ON	ON	ON	ON	ON

The red LED in the back box interconnect door lights when power is turned on and the fan exhausts heat from inside the back box. If you have an outdoor pendant model with a heater, heater elements in the back box turn on at 70°F (21°C) and off at 85°F (29°C). The heater element in the lower dome turns on at 40°F (4°C) and off at 60°F (16°C). The interconnect door fan and heater fans in the outdoor back box operate continuously.

4.1 POWER-UP DISPLAY

NOTE: *The dome will stop operating if voltage at the dome drops below 18 VAC. It will turn back on and go through its start-up routine when the voltage exceeds 18 VAC.*

When the dome is powered up or reset, the monitor displays the selected protocol, revision number, and other information, which remains until the dome moves. The information displayed depends on the selected protocol and the choice made on the menu for selectable power-up mode. As a default, the dome goes to a random position.

The control system protocol (C, D, or P) appears. C is for Pelco's Coaxitron® control system. D-type control is RS-422 compatible with Pelco's CM6700, MPT9500, and CM8500 controllers or with American Dynamics control systems using the AD2083 Translator. P-type control is RS-422 compatible with Pelco's CM6700 and CM9750/CM9760 control systems.

For D and P protocols, the device address, baud rate, parity (N), number of data bits (8), and number of stop bits (1) appears. For D protocol, "32 presets" appears if the 32-preset mode is selected (SW1-7 ON). "CM9500 mode" appears if CM9500 mode is selected (SW1-8 ON).

4.2 PAN AND TILT FUNCTIONS

Use your controller's joystick to control pan and tilt operation.

*   **Fixed-Speed Controllers -** Pan and tilt operation is at a fixed speed; the controller determines the speed.

*   **Variable-Speed Controllers -** Depending on the joystick's position, standard pan operation ranges from 0.5 to 80 degrees per second (dps); standard tilt operation ranges from 0.5 to 40 dps. When performing preset operations, pan speed is 250 dps; tilt speed is 100 dps. In turbo mode, pan speed is 150 dps, while turbo mode does not affect tilt speed.

4.2.1 Auto Flip

When the camera tilts down and just beyond vertical, the dome rotates 180 degrees. When the dome rotates (flips), the camera starts moving upward while you continue holding the joystick in the down position. Once you release the joystick after the dome rotates, joystick control returns to normal operation. Auto-flip is useful for following someone who passes directly beneath the camera. You can disable this feature in the auto flip programming menu.

4.2.2 Scan Speed

Scan speed is adjustable from 1 to 40 degrees per second through the programming menu.

4.3 ZOOM

The Spectra® Lite dome can magnify an object up to 12 times (12X of optical zoom).

Zoom Telephoto - Press and hold down the Zoom Tele button until you have the picture you want.

Zoom Wide - Press the Zoom Wide button to increase the field of view.

4.4 PRESET FUNCTIONS

NOTE: *For AMERICAN DYNAM-ICS controllers with only 32 pre-sets, set switch SW1-7 on the dome drive in the ON position. When SW1-7 is ON, preset*

99 becomes 32
98 becomes 31
97 becomes 30
96 becomes 29
95 becomes 28
94 becomes 27
93 becomes 26
92 becomes 25
91 becomes 24
90 becomes 23

If the limit stops are turned off (re-fer to Section 4.7.11.1), presets 23-26 can be used as regular presets.

The Spectra® Lite dome can go to 32 preset locations, each with a 20-character label. Presets are numbered 1-32. Refer to your control system documentation for programming presets.

When doing a preset operation, the amount of error in moving to the pan and tilt positions is 1/2 degree. You may get erratic operation if you command the dome to go to an undefined preset.

Presets 33 and 34 are fixed commands (you cannot program them). Preset 33 is the "flip" command, which pans the dome drive 180 degrees from its current posi-tion. Preset 34 is the "pan zero" command, which directs the dome drive to the factory-determined zero reference point. The following presets are reserved for special functions.

Preset	Function
1	Park (Section 4.7.12)
33	Flip command (Section 4.4)
34	Pan zero command (Section 4.4)
90-93	Limit stops (Sections 4.5 and 4.7.11)
95	Select camera programming menu (Section 4.7.1)
96	Stop a scan (Section 4.5)
97-99	Activate scanning (Section 4.5)

4.5 RANDOM, FRAME, AND AUTO SCANNING

NOTE: *In the following material, sometimes a number in parenthe-ses follows a preset. This second number is for 32-preset mode (conversion that lets Pelco's pre-sets work with American Dynam-ics controllers). If you are using an American Dynamics controller, use the number in parentheses.*

Program preset 97 (30) to start random scanning. Program preset 98 (31) to acti-vate frame scanning (three seconds of scanning followed by a three-second pause). Program preset 99 (32) to start auto (continuous) scanning.

Software controls scan limit stops. When the dome reaches one, it immediately reverses direction. Refer to Section 4.7.11, LIMIT STOPS, to program the scan limit stops. Program preset 96 (29) to stop a scan. Any pan and tilt or lens com-mand also stops a scan.

4.6 PARK

If the dome does not receive any commands for a specified period, it goes to preset 1 and parks. The dome will not park if the time specified is zero or preset 1 has not been programmed. The default is zero minutes.

4.7 PROGRAMMING THE SPECTRA® LITE

The dome can be programmed for the following functions:

AGC (automatic gain control)	Gain	Sharpness
Auto flip disable	Limit stops	Shutter speed
Auto park time	Power line synchronization	White balance
Backlight compensation	Power-up mode	
Camera reset	Scan speed	

The main menu contains four secondary menus: Camera, Line Sync, Power Up, and Other. Each secondary menu has submenus, which are structured as shown below. Beside the menu items are section numbers in parentheses showing where the functions are explained.

1. Camera

First Camera Submenu	Second Camera Submenu
Backlight comp (4.7.2)	Shutter speed (4.7.5)
Reset camera (4.7.3)	Sharpness (4.7.6)
Gain/AGC (4.7.4)	Auto sharpness
AGC mode	Sharpness
Gain	White balance (4.7.7)
Next (to second camera	Auto white bal
submenu)	M-G white bal
	Prev (to first camera submenu)

2. Line Sync (4.7.8)   3. Power Up (4.7.9)
       Line sync   Power up
       Line sync phase

4. Other
       Auto flip (4.7.10)
       Limit stops (4.7.11)
       Park time minutes (4.7.12)
       Scan speed deg/s (4.7.13)

The following sections explain how to program the Spectra® Lite dome using the menu choices.

4.7.1 Main Menu Access

You can call up the main menu on your monitor by programming (setting or creating) preset 95 (28). Programming preset 95 varies according to the type of controller you are using. Below are instructions for programming preset 95 for various controllers.

CM6700
1. Enter the number of the Spectra® Lite camera and press the CAM key.
2. Enter 95 and hold the PRESET key for two seconds.
3. In the Edit Preset menu, arrow to SET and press the ACK key. The main menu appears.

CM8500
1. Enter the number of the Spectra® Lite camera and press the CAM key.
2. Highlight PRESET in the Camera menu and hold down the joystick button until the Set Presets prompt appears.
3. Enter 95 and press the PRESET key. The main menu appears.

CM9500
1. Enter the number of the Spectra® Lite camera and press the CAM key.
2. Press the SELECT key twice.
3. Highlight CAM in the Setup menu and press the SELECT key.
4. Highlight PRESET in the Camera menu and press the SELECT key.
5. Enter 95 and press the F1 key. The main menu appears.

CM9750
1. Turn the KEY SWITCH to the ON position.
2. Press the PROG key. PROGRAM appears on the LCD screen.
3. Press the PRES key. The PRESET prompt appears.
4. Enter 95 and press the ENTER key. The main menu appears.
5. Turn the KEY SWITCH to the OFF position.

CM9760
1. In the default menu, select DEF. The Define Submenu appears.
2. Enter your four-digit PIN.
3. Enter 95 and select PRST. The main menu appears on the monitor.
4. Select the Quit icon to return to the default menu.

MPT9500
Standard Coaxitron® Mode
1. Enter 95 and press the PRESET SET key.
2. Position the asterisk in the YES row and press the F1 key. The main menu appears.

Extended Coaxitron® or RS-485 Mode
1. Enter 95 and press the PRESET SET key.
2. Press the F2 key. The main menu appears.

4.7.2 Backlight Compensation

Non-Sensitive Area

Sensitive Area
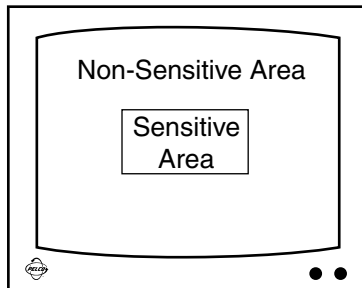
Figure 2. Backlight Compensation

The two backlight compensation modes are on and off. Backlight compensation lets the dome compensate for bright light behind the object you want to view. With backlight compensation ON, the dome uses only the center 10 percent of the picture for adjusting the iris (refer to Figure 2). A bright light source outside this area washes out to white. The camera adjusts the iris so the object in the sensitive area is properly exposed. To change the backlight compensation mode:

1. On the main menu, move the joystick up or down to position the cursor (>) beside Camera.
2. Press the Iris Open button to enter the Camera submenu.
3. Move the joystick up or down to position the cursor beside Backlight Comp.
4. Press the Iris Open button. The cursor moves to the right beside the word On or Off.
5. Move the joystick up or down to toggle between On and Off.
6. SELECT – Press the Iris Open button to select your choice.
   CANCEL – Press the Iris Close button if you do not want to change the setting.

4.7.3 Reset Camera

Resetting the camera returns the following settings to their defaults.

Setting:	Default:
Gain/AGC	
AGC mode	Auto
Gain	No default setting
Backlight comp	Off
Shutter speed	Auto
White balance	
Auto white balance	On
R-B white balance	No default setting
M-G white balance	No default setting
Sharpness	
Auto sharpness	On
Sharpness	No default setting

The following settings are not reset when the camera is reset: park time, auto flip disable, and limit stops.

Turning off power to the dome does not reset the camera. Camera settings are retained in memory, and when power is restored, the settings are the same as when the camera was turned off.

To reset the camera:

1. On the main menu, move the joystick up or down to position the cursor (>) beside Camera.
2. Press the Iris Open button to enter the Camera submenu.
3. Move the joystick up or down to position the cursor beside Reset Camera.
4. Press the Iris Open button to reset the camera.

4.7.4 Gain/AGC

4.7.4.1 AGC Mode

The three AGC (Automatic Gain Control) modes are auto, on, and off.

• In auto mode, the dome automatically adjusts the gain–the amount of amplification the camera places on its video information to obtain a full 1-volt peak-to-peak video signal out. If the iris is manually opened to its wide-open position and the picture is weak, the AGC can be turned off and the gain increased manually to improve the picture. When you close the iris, the AGC turns back on automatically when the lens iris starts closing.
• In on mode, the AGC is on all the time.
• In off mode, the AGC is off.

To change the AGC mode:

1. On the main menu, move the joystick up or down to position the cursor (>) beside Camera.
2. Press the Iris Open button to enter the Camera submenu.
3. Move the joystick up or down to position the cursor beside Gain/AGC.
4. Press the Iris Open button to enter the Gain/AGC submenu.
5. Move the joystick up or down to position the cursor beside AGC mode.
6. Press the Iris Open button. The cursor moves to the right beside the word Auto, On, or Off.
7. Move the joystick up or down to position the cursor beside Auto, On, or Off.
8. SELECT – Press the Iris Open button to select your choice.
   CANCEL – Press the Iris Close button if you do not want to change the setting.

4.7.4.2 Gain

Gain adjusts the signal level of the video output. Increasing the gain in low light conditions increases the noise level in the picture. To change the gain:

1. On the main menu, move the joystick up or down to position the cursor (>) beside Camera.
2. Press the Iris Open button to enter the Camera submenu.
3. Move the joystick up or down to position the cursor beside Gain/AGC.
4. Press the Iris Open button to enter the Gain/AGC submenu.
5. Move the joystick up or down to position the cursor beside Gain.
6. Press the Iris Open button. The cursor moves to the right beside the current gain setting (a numeric value).
7. Move the joystick up or down to change the gain (making the picture on your monitor get brighter or darker).
8. SELECT – Press the Iris Open button to select your choice.
   CANCEL – Press the Iris Close button if you do not want to change the setting.

4.7.5 Shutter Speed

There are nine electronic shutter speeds:

Auto	1/100	1/120
1/500	1/1,000	1/2,000
1/4,000	1/10,000	1/30,000

In the Auto setting the camera controls the shutter speed automatically. Increasing the shutter speed lowers the light sensitivity, but rapidly moving objects will be less blurred as the speed is increased. To change the electronic shutter speed settings:

1. On the main menu, move the joystick up or down to position the cursor (>) beside Camera.
2. Press the Iris Open button to enter the Camera submenu.
3. Move the joystick up or down to position the cursor beside Next.
4. Press the Iris Open button to go to the next camera submenu.
5. Move the joystick up or down to position the cursor beside Shutter Speed.
6. Press the Iris Open button. The cursor moves to the right beside the current shutter speed.
7. Move the joystick up or down to choose the shutter speed.
8. SELECT – Press the Iris Open button to select your choice.
   CANCEL – Press the Iris Close button if you do not want to change the setting.

4.7.6 Sharpness

The two modes for adjusting the picture sharpness are automatic and manual. To change the mode:

1. On the main menu, move the joystick up or down to position the cursor (>) beside Camera.
2. Press the Iris Open button to enter the Camera submenu.
3. Move the joystick up or down to position the cursor beside Next.
4. Press the Iris Open button to go to the next camera submenu.
5. Move the joystick up or down to position the cursor beside Sharpness.
6. Press the Iris Open button. Another menu appears with the auto sharpness and sharpness selections.
7. Move the joystick up or down to position the cursor beside one of the choices. Press the Iris Open button.

AUTO SHARPNESS - Move the joystick up or down to toggle between the On and Off choices. Press the Iris Open button to select one, or press the Iris Close button if you do not want to change the setting.

SHARPNESS - Move the joystick up or down to a value. As you change the value, you can see the sharpness change. Press the Iris Open button to select the value, or press the Iris Close button if you do not want to change the setting. If Auto Sharpness is on, it changes to off when you select a new value.

4.7.7 White Balance

The three white balance settings are auto, red-blue, and magenta-green. To change the white balance setting:

1. On the main menu, move the joystick up or down to position the cursor (>) beside Camera.
2. Press the Iris Open button to enter the Camera submenu.
3. Move the joystick up or down to position the cursor beside Next.
4. Press the Iris Open button to go to the next camera submenu.
5. Move the joystick up or down to position the cursor beside White Balance.
6. Press the Iris Open button. Another menu appears with the auto, red-blue, and magenta-green selections.
7. Move the joystick up or down to position the cursor beside one of the choices. Press the Iris Open button.

AUTO WHITE BALANCE - Move the joystick up or down to toggle between the Auto and Off choices. Press the Iris Open button to select one, or press the Iris Close button if you do not want to change the setting.

R-B WHITE BALANCE - Move the joystick up or down to a value. As you change the value, you can see the color change on your monitor. Press the Iris Open button to select the value, or press the Iris Close button if you do not want to change the setting. If Auto White Balance is on, it changes to off when you select a new value.

M-G WHITE BALANCE - Move the joystick up or down to a value. As you change the value, you can see the color change on your monitor. Press the Iris Open button to select the value, or press the Iris Close button if you do not want to change the setting. If Auto White Balance is on, it changes to off when you select a new value.

4.7.8 Line Synchronization

You can turn line synchronization on or off.

*   If it is on, you can adjust the synchronization of the power line voltage so it is in phase with other cameras. If cameras are out of phase with each other, they may produce what appears to be vertical roll when switching between cameras.
*   If it is off, the dome synchronizes to an internal clock.

To change the line synchronization settings:

1. On the main menu, move the joystick up or down to position the cursor (>) beside Line Sync.
2. Press the Iris Open button. Another menu appears with the Line Sync and Line Sync Phase selections.
3. Move the joystick up or down to position the cursor beside one of the choices.

LINE SYNC - Move the joystick up or down to toggle between On and Off. Press the Iris Open button to select the choice. If you changed to Off, the camera may reset itself as it adjusts to the new synchronization. If the camera resets, it only affects line synchronization–it will **not** change any other camera parameters, such as auto focus or auto iris. Press the Iris Close button if you do not want to change the setting.

LINE SYNC PHASE - Move the joystick up or down to change the numeric value. The value represents the phase angle in tenths of a degree between 0 and 359 degrees (for example, 900 is 90 degrees; 2400 is 240). Press the Iris Open button to select the choice. The Line Sync setting will change to On. The camera may reset or the picture on your monitor may wiggle when you change the phase angle. If the camera resets, it only affects synchronization–it will **not** change any other camera parameters, such as auto focus or auto iris. Press the Iris Close button if you do not want to change the setting.

4.7.9 Power Up Mode

This feature lets the dome resume a desired condition following power-up. The menu includes the following choices:

*   **Default** – On power-up, the dome goes through a configuration cycle and stops at zero reference, showing "Configuration Done," and address and mode settings on the screen.
*   **Park** – The dome moves to preset 1 when the power-up sequence finishes. The only text on the screen is the preset label (if any).
*   **Scan Auto** – The dome initiates scan mode when the power-up sequence finishes. Again, there is no text.
*   **Scan Frame** – The dome initiates a frame scan when the power-up sequence finishes.
*   **Scan Rand** – The dome initiates a random scan when the power-up sequence finishes.

The default setting is Default. To select the power-up mode:

1. On the main menu, move the joystick up or down to position the cursor (>) beside Power Up Mode.
2. Press the Iris Open button to enter the Power Up Mode submenu.

3. Move the joystick up or down to cycle through the selections. Stop on the item you want to select.
4. SELECT – Press the Iris Open button to select your choice.
   CANCEL – Press the Iris Close button if you do not want to change the setting.

4.7.10 Auto Flip

The two auto flip modes are on (auto flip enabled) or off (feature disabled). To change the auto flip mode:

1. On the main menu, move the joystick up or down to position the cursor (>) beside Other.
2. Press the Iris Open button to enter the Other submenu.
3. Move the joystick up or down to position the cursor beside Auto Flip.
4. Press the Iris Open button. The cursor moves to the right beside the word On or Off.
5. Move the joystick up or down to toggle between On and Off.
6. SELECT – Press the Iris Open button to select your choice.
   CANCEL – Press the Iris Close button if you do not want to change the setting.

4.7.11 Limit Stops

The two types of limit stop are manual and scan. When manual limit stops are set, a manual (joystick) pan operation stops when a limit is reached. When scan limit stops are set, the dome reverses direction during random, frame, and auto scanning when a limit stop is reached. Software controls limit stops. To set limit stops:

1. Turn on limit stop mode.
2. Program the limit stops.

4.7.11.1 Turning Limit Stops On or Off

To change the limit stop mode:

1. On the main menu, move the joystick up or down to position the cursor (>) beside Other.
2. Press the Iris Open button to enter the Other submenu.
3. Move the joystick up or down to position the cursor beside Limit Stops.
4. Press the Iris Open button. The cursor moves to the right beside the word On or Off.
5. Move the joystick up or down to toggle between On and Off.
6. SELECT – Press the Iris Open button to select your choice.
   CANCEL– Press the Iris Close button if you do not want to change the setting.

4.7.11.2 Programming Limit Stops

Manual Limit Stops

NOTE: *Programming preset 90 (23) disables the manual limit stops until preset 91 (24) is set.*

Refer to the documentation for your control system for programming presets, then do the following:

1. Make sure limit stops are turned ON (refer to Section 4.7.11.1), then exit the menu.
2. Push the joystick left until you reach the limit you want the camera to go to on the left.
3. Program preset 90 (23).
4. Push the stick right to the limit you want the camera to go to on the right.
5. Program preset 91 (24).

Setting presets 90 (23) and 91 (24) to the same point disables manual limit stops.

Scan Limit Stops

Refer to the documentation for your control system for programming presets, then do the following:

1. Make sure limit stops are turned ON (refer to Section 4.7.11.1), then exit the menu.
2. Push the joystick left until you reach the limit you want the camera to go to on the left.
3. Program preset 92 (25).
4. Push the joystick right to the limit you want the camera to go to on the right.
5. Program preset 93 (26).

Setting presets 92 (25) and 93 (26) to the same point disables scan limit stops.

4.7.12 Park Time Minutes

This feature parks the dome at preset 1 after a programmed number of minutes of control inactivity. You can set the time from 1 to 720 minutes (12 hours). Setting the time to zero disables this feature. To change the park time:

1. On the main menu, move the joystick up or down to position the cursor (>) beside Other.
2. Press the Iris Open button to enter the Other submenu.
3. Move the joystick up or down to position the cursor beside Park Time Minutes.
4. Press the Iris Open button. The cursor moves to the right beside the current park time.
5. Move the joystick up or down to change the park time.
6. SELECT – Press the Iris Open button to select your choice.
    CANCEL – Press the Iris Close button if you do not want to change the setting.

4.7.13 Scan Speed

Scan speed is adjustable from 1-40 degrees per second, and occurs in three scan modes: auto, random, and frame. To change the scan speed:

1. On the main menu, move the joystick up or down to position the cursor (>) beside Other.
2. Press the Iris Open button to enter the Other submenu.
3. Move the joystick up or down to position the cursor beside Scan Speed deg/s.
4. Press the Iris Open button. The cursor moves to the right beside the current number of degrees.
5. Move the joystick up or down to toggle through the number of degrees (1-40) until you reach the number you want. (If set on a low number, the scan will appear to barely move but is still functioning.)
6. SELECT – Press the Iris Open button to select your choice.
    CANCEL – Press the Iris Close button if you do not want to change the setting.

5.0 TROUBLESHOOTING

NOTE: *The dome drive contains no user-serviceable parts. If there is a problem with the dome drive, return it to Pelco as a complete unit for servicing. For instructions on removing the back box assembly, refer to Section 6.1, BACK BOX ELECTRONIC ASSEMBLY REMOVAL, in manual C1487M.*

Symptom: Unit or fan does not operate

Refer to Section 6.0, TROUBLESHOOTING, in manual C1487M.

6.0 MAINTENANCE

6.1 DOME CLEANING

Do not scratch the dome. Clean dome exterior and interior surfaces (except chrome or gold) with a nonabrasive liquid or spray cleaner/wax. Never touch the inside surface of a chrome or gold dome with your fingers. Instead, follow the care instructions in manual C1487M.

6.2 SERVICE MANUAL

Obtain a service manual (C1455SM): at Pelco's web site ftp://www.pelco.com, or call Pelco's Literature Department.

MECHANICAL

Pan Movement: 360° continuous pan rotation

Vertical Tilt: Unobstructed +2° to -92°

Manual Pan Speed: 0.5°-80°/sec manual operation, 150°/sec turbo

Manual Tilt Speed: 0.5°-40°/sec

Preset Speeds:
   Pan: 250°/sec
   Tilt: 100°/sec

Fixed-Speed
Controller:
   Pan: 30°/sec
   Tilt: 12°/sec

CAMERA

Signal Format: NTSC

Scanning System: 2:1 interlace

Image Sensor: 1/4-inch interline transfer
Effective pixels: 510 (H) x 492 (V)

Resolution: 330 TV lines

Lens
  Minimum f/stop: F1.6-2.8
  Focal Length: 4 mm to 48 mm optical
  Zoom Ratio: 12X optical zoom
  Horizontal Angle
  of View: 47° (at 4 mm wide zoom), 4° (at 48 mm telephoto zoom)
  MTBF: >2 million cycles at room temperature (zoom, focus, iris)
  Focus: Manual with capability to focus when going to a present position

Sensitivity: 4 lux at f/1.6 at signal level of 40 IRE, gain high

Signal Process: DSP-3R

Sync System: Internal

White Balance: Automatic with manual override*

Shutter Speed: Automatic (electronic iris)/manual: 1/100 – 1/30,000*

Iris Control: Manual

Gain Control: Automatic with manual override*

Video Output: -.714 V ±.07 V (100 IRE ±10 IRE)

Signal to Noise: >46 dB

* Manual control over camera setup functions depends on the head end and is not available on all control models.

(Design and product specifications subject to change without notice.)

WARRANTY

Pelco will repair or replace, without charge, any merchandise proved defective in material or workmanship for a period of one year after the date of shipment.

Exceptions to this warranty are as noted below:

- Five years on FT/FR8000 Series fiber optic products.
- Three years on Genex® Series products (multiplexers, server, and keyboard).
- Three years on Camclosure® and fixed camera models, except the CC3701H-2, CC3701H-2X, CC3751H-2, CC3651H-2X, MC3651H-2, and MC3651H-2X camera models, which have a five-year warranty.
- Two years on standard motorized or fixed focal length lenses.
- Two years on Legacy®, CM6700/CM6800/CM9700 Series matrix, and DF5/DF8 Series fixed dome products.
- Two years on Spectra®, Esprit®, ExSite™, and PS20 scanners, including when used in continuous motion applications.
- Two years on Esprit® and WW5700 Series window wiper (excluding wiper blades).
- Eighteen months on DX Series digital video recorders, NVR300 Series network video recorders, and Endura™ Series distributed network-based video products.
- One year (except video heads) on video cassette recorders (VCRs). Video heads will be covered for a period of six months.
- Six months on all pan and tilts, scanners or preset lenses used in continuous motion applications (that is, preset scan, tour and auto scan modes).

Pelco will warrant all replacement parts and repairs for 90 days from the date of Pelco shipment. All goods requiring warranty repair shall be sent freight prepaid to Pelco, Clovis, California. Repairs made necessary by reason of misuse, alteration, normal wear, or accident are not covered under this warranty.

Pelco assumes no risk and shall be subject to no liability for damages or loss resulting from the specific use or application made of the Products. Pelco's liability for any claim, whether based on breach of contract, negligence, infringement of any rights of any party or product liability, relating to the Products shall not exceed the price paid by the Dealer to Pelco for such Products. In no event will Pelco be liable for any special, incidental or consequential damages (including loss of use, loss of profit and claims of third parties) however caused, whether by the negligence of Pelco or otherwise.

The above warranty provides the Dealer with specific legal rights. The Dealer may also have additional rights, which are subject to variation from state to state.

If a warranty repair is required, the Dealer must contact Pelco at (800) 289-9100 or (559) 292-1981 to obtain a Repair Authorization number (RA), and provide the following information:

1. Model and serial number
2. Date of shipment, P.O. number, Sales Order number, or Pelco invoice number
3. Details of the defect or problem

If there is a dispute regarding the warranty of a product which does not fall under the warranty conditions stated above, please include a written explanation with the product when returned. Method of return shipment shall be the same or equal to the method by which the item was received by Pelco.

RETURNS

In order to expedite parts returned to the factory for repair or credit, please call the factory at (800) 289-9100 or (559) 292-1981 to obtain an authorization number (CA number if returned for credit, and RA number if returned for repair).

All merchandise returned for credit may be subject to a 20% restocking and refurbishing charge.

Goods returned for repair or credit should be clearly identified with the assigned CA or RA number and freight should be prepaid. Ship to the appropriate address below.

If you are located within the continental U.S., Alaska, Hawaii or Puerto Rico, send goods to:

> Service Department
> Pelco
> 3500 Pelco Way
> Clovis, CA 93612-5699

If you are located outside the continental U.S., Alaska, Hawaii or Puerto Rico and are instructed to return goods to the USA, you may do one of the following:

If the goods are to be sent by a COURIER SERVICE, send the goods to:

> Pelco
> 3500 Pelco Way
> Clovis, CA 93612-5699 USA

If the goods are to be sent by a FREIGHT FORWARDER, send the goods to:

> Pelco c/o Expeditors
> 473 Eccles Avenue
> South San Francisco, CA 94080 USA
> Phone: 650-737-1700
> Fax: 650-737-0933